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10/042,528

10/18/2001

Andrew William Mackie

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EXAMINER

JACKSON, JAKIEDA R

ART UNIT

PAPER NUMBER

2626

MAIL DATE

DELIVERY MODE

06/12/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/042,528

Applicant(s)

MACKIE, ANDREW WILLIAM

Examiner

Jakieda R. Jackson

Art Unit

2626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 March 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3-9 is/are allowed.
- 6) ☒ Claim(s) 1-2 and 10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Response to Amendment*

1. In response to the Office Action mailed February 7, 2007, applicant submitted an amendment filed on March 27, 2007, in which the applicant traversed and requested reconsideration with respect to **claim 1**.

### *Response to Arguments*

2. Applicants argue that Carcus does not provide even the slightest suggestion of breakpoint analysis for analyzing compound words in an unrestricted natural-language input. Hamamura, on the other hand, relates to character and word recognition and word delimiting. The examiner argues that Hamamura discloses a breakpoint analysis. As such, the suggestions of Carcus lead one nowhere near the Hamamura patent. Applicant submits that there is no suggestion, teaching or motivation to combine Carcus and Hamamura. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the recitation segmenting compound words in an unrestricted natural language input has not been given patentable weight because the recitation occurs in the preamble. A

preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Applicant further argues that Carcus does not provide any suggestion, disclosure or teaching of traversing substrings of natural-language delimited by probabilistic breakpoints. Applicant's arguments are moot in view of new grounds of rejection.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 1-2 and 10** are rejected under 35 U.S.C. 103(a) as being unpatentable over Carcus et al. (USPN 6,035,268), hereinafter referenced as Carcus.

Regarding **claim 1**, Carcus discloses a method for segmenting compound words in an unrestricted natural-language input, the method comprising:

receiving a natural-language input (natural language) consisting of a plurality of characters (receiving stream of input text; compound word; column 1, line 19 –column 7, line 18);

constructing a set of probabilistic breakpoints in the natural-language input based on probabilistic breakpoint analysis (statistical analysis; column 1, line 19 –column 7, line 18);

identifying a plurality of linkable components by traversal of substrings of the natural-language (natural language) input delimited by the set of probabilistic breakpoints (word breaks) wherein a linkable component (link) is identified by locating the component in a lexicon (lexicon; column 1, line 19 –column 7, line 18); and

returning a segmented string consisting of a plurality of linkable components spanning (spanning) the natural-language input, wherein the segmented string is interpreted as a compound word (compound word; column 1, line 19 –column 7, line 18).

Regarding **claim 2**, Carcus discloses a method further including the step of analyzing a chart of the linkable components in the case that the segmented string cannot be constructed and returning an unsegmented string interpretable as a partial analysis of a compound word (removed from the word breaker; column 1, line 19 – column 7, line 18 and column 36-54).

Regarding **claim 10**, Carcus discloses wherein the traversal of substrings is performed in an order determined by probabilities obtained in the probabilistic breakpoint analysis (spanning; compound word; column 1, line 19 –column 7, line 18).

***Allowable Subject Matter***

5. The following is a statement of reasons for allowance:

As for independent claim 3, it recites an apparatus for segmenting compound words in a natural-language input. Prior art such as Franz show a similar configuration but fails to teach the recited configuration wherein a probabilistic breakpoint analyzer is coupled to the startpoint probability matrix, the endpoint probability matrix and the natural-language input, the probabilistic breakpoint analyzer being operative to generate a breakpoint-annotated input from the natural-language input.

Dependent claims 4-9 are allowed because they further limit their parent claims.

***Conclusion***


6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jakieda R. Jackson whose telephone number is 571-272-7619. The examiner can normally be reached on Monday, Tuesday and Thursday 7:30 a.m. to 5:00p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on 571-272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2626

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JRJ  
May 31, 2007



**DAVID HUDSPETH**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER**